

LISTING OF CLAIMS:

1. (Currently amended) A platform comprising one or more dry porous membranes for detecting at least one component in a low volume liquid sample, the membranes providing a membrane channel through which the liquid sample can flow by capillary action while reactions take place determinative of at least one component in the sample;

the platform formed with sample application means and having top and bottom layers with hydrophilic surfaces to enclose and position the membranes, each layer having a top and bottom [layer] surface formed so that the bottom surface of the top layer and the top surface of the bottom layer may be brought into fixed face to face contact so that the layers enclose and hold the membranes in place and form a platform flow channel upstream of the membranes and downstream of the sample application means, and including at least one indent in at least one of the hydrophilic surfaces, the formed platform flow channel is in fluid communication with the membranes to permit the liquid sample to flow in a continuous pathway from the upstream sample application means through the platform flow channel and then to an edge of an upstream end of the membranes towards [to] the distal end of [the] said membranes.

2. (Previously amended) The platform according to claim 1 wherein the platform flow channel has an indent in the bottom surface of the top layer.

3. (Withdrawn) A platform according to claim 1 in which the platform flow channel is formed in the top surface of the bottom layer.

4. (Withdrawn) A platform according to claim 1 in which the platform flow channel is formed with indents in the top surface of the bottom layer and in the bottom surface of the top layer.

5. (Previously amended) The platform according to claim 1 further comprising a window in the top layer for observing the results of a reaction which takes place in the membrane.

6. (Currently amended) A device for the rapid and efficient detection of at least one component in a low volume liquid sample, the device containing a membrane in which reactions take place determinative of the presence of at least one component in the sample;

the membrane being enclosed in a platform formed with sample application means and having top and bottom layers with hydrophilic surfaces fixed to each other through face to face contact of the bottom surface of the top layer and the top surface of the bottom layer to enclose and position the membrane, the surfaces in such face to face contact form a platform flow channel upstream of the membrane and downstream of the sample application means, and including at least one indent in at least one of the hydrophilic surfaces, the formed platform flow channel being in fluid communication with the membrane to permit the liquid sample to flow in a continuous pathway from the upstream sample application means through the platform flow channel and then to an edge of an upstream end of the membrane towards [to] the distal end of the membrane.

7. (Currently amended) The device according to claim 6, wherein the platform flow channel has an indent in the bottom surface of the top layer.

8. (Withdrawn) A device according to claim 6 in which the platform flow channel is formed with an indent in the top surface of the bottom layer.

9. (Withdrawn) A device according to claim 6 in which the platform flow channel is formed with indents in the top surface of the bottom layer and the bottom surface of the top layer.

10. (Previously amended) The device according to claim 6 further comprising a window in the top layer for observing the results of a reaction which takes place in the membrane.

11. (Previously amended) The device according to claim 6 wherein the membrane contains one or more reagent[s] for detecting one or more analyte[s].

Appl. No. 10/681,639
Amendment dated August 5, 2009
Reply to Office Action

12. (Previously amended) The device according to claim 11 wherein the analyte is selected from the group consisting of hCG, LH, PSA, Myoglobin, Troponin I, Troponin T, Creatinine Kinase MB, C Reactive Protein, ApoB 100, and Brain Natriuretic Peptide.
13. (Previously amended) The device according to claim 6 wherein the membrane contains the reagents for detecting Troponin I or Troponin T.
14. (Withdrawn) A device according to claim 6 in which the membrane contains the reagents for detecting hCG.
15. (Withdrawn) A device according to claim 6 in which the membrane contains the reagents for detecting LH.
16. (Withdrawn) A device according to claim 6 in which the membrane contains the reagents for detecting PSA.
17. (Withdrawn) A device according to claim 6 in which the membrane contains the reagents for detecting C Reactive Protein.
18. (Withdrawn) A device according to claim 6 in which the membrane contains the reagents for detecting ApoB 100.
19. (Withdrawn) A device according to claim 6 in which the membrane contains the reagents for detecting Brain Natriuretic Peptide.
20. (Currently amended) A device for the rapid and efficient detection of one or more components in a whole blood sample, the device containing an upstream detection membrane and a downstream capture membrane, the detection membrane constructed to filter substantially all of the red blood cells from the sample and containing a mobile labeled detecting reagent which will react with the one or more components to form a reaction product which moves downstream in the detection membrane;

a capture membrane downstream of the detection membrane and containing a fixed, immobile capture reagent which will react with and concentrate the reaction product at a capture line, the downstream end of the detection membrane slightly overlapping the upstream end of the capture membrane;

the membranes being enclosed in a platform formed with sample application means and having top and bottom layers with hydrophilic surfaces fixed to each other through face to face contact of the bottom surface of the top layer and the top surface of the bottom layer to enclose both membranes;

the surfaces in face to face contact form a platform flow channel upstream of the detection [detecting] membrane and downstream of the sample application means, and include at least one indent in at least one of the hydrophilic surfaces, and the formed platform flow channel is in fluid communication with the upstream end of the detection [detecting]membrane to permit the sample to flow from the application means through the platform flow channel and to an edge of an upstream end of the detection membrane to the distal end of the capture membrane.

21. (Previously amended) A device according to claim 20 wherein the platform flow channel has an indent in the bottom surface of the top layer.

22. (Withdrawn) A device according to claim 20 in which the platform flow channel is formed with an indent in the top surface of the bottom layer.

23. (Withdrawn) A device according to claim 20 in which the platform flow channel is formed with indents in the top surface of the bottom layer and bottom surface of the top layer.

24. (Previously amended) A device according to claim 20 further comprising a window in the top layer for observation of the results of a reaction which takes place in the capture membrane.

25. (Previously amended) A device according to claim 20 wherein the detection membrane contains one or more reagent[s] for detecting one or more analyte[s].

26. (Previously amended) A device according to claim 25 wherein the analyte is selected from the group consisting of hCG, LH, PSA, Myoglobin, Troponin I, Creatinine Kinase MB, C Reactive Protein, ApoB 100, and Brain Natriuretic Peptide.
27. (Withdrawn) A device according to claim 20 in which the detection membrane contains reagents for detecting hCG.
28. (Withdrawn) A device according to claim 20 in which the detection membrane contains the reagents for detecting LH.
29. (Withdrawn) A device according to claim 20 in which the detecting membrane contains the reagents for detecting PSA.
30. (Withdrawn) A device according to claim 20 in which the detecting membrane contains the reagents for detecting C Reactive Protein.
31. (Withdrawn) A device according to claim 20 in which the detecting membrane contains the reagents for detecting ApoB 100.
32. (Withdrawn) A device according to claim 20 in which the detecting membrane contains the reagents for detecting Brain Natriuretic Peptide.
33. (Previously amended) A device according to claim 20 wherein the detecting membrane is a glass fibre membrane and the capture membrane is a nitrocellulose membrane.
34. (Previously amended) A device according to claim 20 wherein the membranes are covered with a transparent cover layer.
35. (Previously amended) A device according to claim 34 wherein the cover layer is a polyester film.

36. (Previously amended) The device of claim 1 or 20, wherein said top and bottom layers further comprise open areas to inhibit the flow of the sample from said platform flow channel into space between the surfaces of said top and bottom layers.

37. (Previously presented) The device of claim 6, wherein said top and bottom layers further comprise open areas to inhibit the flow of the sample from said platform flow channel into space between the surfaces of said top and bottom layers.

38. (Previously amended) The device of claim 1, wherein said top surface of the bottom layer further comprises indents that mate with rectangular protrusions in said bottom surface of the top layer.

39. (Previously amended) The device of claim 1, wherein said top surface of the bottom layer further comprises cylindrical pillars that register with cylindrical indents in said bottom surface of the top layer.